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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,380	07/02/2003	Peter Willimowski	854G-000160	3696
27572	7590	01/03/2007	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			CHU, HELEN OK	
		ART UNIT	PAPER NUMBER	
		1745		
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/03/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/612,380	WILLIMOWSKI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Helen O. Chu	1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 06 October 2006.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-10 and 34 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-10, 34 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>8/17/06</u>	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

1. Applicant's Amendments have been received on 10/6/2006. Claims 1-4, are amended. Claim 34 is new.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1 and 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation "third valve not impeding flow communication between said outlets of said first and second anode sections through said third flow path regardless of an operational state of said third valve" was not found or described in the specification that would allow one of ordinary skill to convey the claimed limitations.

### ***Claims Analysis***

5. The term "vent" is an emission or discharge. (The Random House Dictionary)

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6. The term "effluent" is something that flows out and forth (The Random House Dictionary)

7. The term "valve" is any device that would regulate the flow of a fluid. (The Random House Dictionary) Therefore, any device that can function the same way is a valve.

***Claim Rejections - 35 USC § 102***

8. The rejections under 35 U.S.C 102 (e), on claims 1, 3-8 and 10, as anticipated by Shafer are withdrawn because Applicant amended the claims

9. The rejection under 35 U.S.C. 102(e), on claim 2, as anticipated by Shafer is maintained. The rejection is repeated below for convenience.

10. The rejections under 35 U.S.C 102 (e), on claims 1,5-8 and 10, as anticipated by Faris et al. are withdrawn because Applicant amended the claims

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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12. Claims 1-8, 10 and 34 rejected under 35 U.S.C. 102(e) as being anticipated by Shafer (US Publication 2004/0166383).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In regards to claims 1 and 34, the Schafer reference illustrates a fuel cell system (Figure 2) having a cathode section and two anode sections (Figure 2, Components 80 and 82) each having inlets and outlets. The fuel cell system further illustrates the two anode sections with valves at the inlets (Figure 2, Components 134 and 128) and outlets (Figure 2, Components 128 and 130). The anode outlets have flow communication (Applicant's third flow path; Figure 2, Component 148). The flow path 148 connects the outlet flow paths of the first and second anode and a vent valve (Figure 2, Component 140) that would not impede flow communication between the outlets of the first and second anode regardless of an operational state of said third valve.

Regarding claim 2, the Schafer reference illustrates a fuel cell system (Figure 2) having a cathode section and two anode sections (Figure 2, Components 80 and 82) each having inlets and outlets. The fuel cell system further illustrates the two anode sections with valves at the inlets (Figure 2, Components 134 and 128) and outlets

(Figure 2, Components 128 and 130). The anode outlets have flow communication (Applicant's third flow path; Figure 2, Component 122). The flow path 122 connects the outlet flow paths of the first and second anode and a third vent valve (Figure 2, Component 132). Further a feed stream (Applicant's fourth flow path Figure 2, Component 94 or 110) and further comprises another fourth valve (Figure 2, Component 132).

In regards to claims 3-8, it is well known in the art of valves that valves are used to regulate flow. In addition, the Schafer reference teaches valves are used to restrict, block, or selectively vent flows (Paragraph 20).

In regards to claim 10, the Schafer reference illustrates the anode sections to be different portions of separate fuel cell stacks (Figure 2).

13. Claims 1, 5-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Faris et al. (US Publication 2004/0048133)

In regards to claims 1, the Faris et al. reference illustrates a fuel cell system having at least one cathode section (Paragraph 2) and two anode sections (Figure 3, Components 48a and 48b) each having inlets and outlets. The fuel cell system further illustrates the two anode sections with valves at the inlets (Figure 3, Components 46a and 46b) and valves downstream of the anode outlets (Figure 3, Components 52a and 52b). The anode outlets have flow communication (Applicant's third flow path; Figure 3, Component 50), and further comprises another third valve (Figure 3, Component 42a). Regardless of the rate at which the pump is pumping (regardless of an operational

state) it would not impede on whether the first and second anode outlet streams in contact (flow communication) with each other.

In regards to claims 5-8, it is well known in the art of valves that valves are used to regulate flow. In addition, the Faris et al. reference teaches valves are used to selectively feed fuel and exhaust reactions (Paragraph 54).

In regards to claim 10, the Schafer reference illustrates the anode sections to be different portions of separate fuel cell stacks (Figure 3).

***Claim Rejections - 35 USC § 103***

14. The rejections under 35 U.S.C 103 (a), on claim 9, as unpatentable by Shafer are maintained because Applicant. The rejection is repeated below for convenience.
15. The rejections under 35 U.S.C 103 (a), on claim 9, as unpatentable by Faris are maintained because Applicant amended the claims. The rejection is repeated below for convenience
16. Claim 9 is rejected under 35 U.S.C. 103(a) as being obvious over Schafer (US Publication 2004/0166383).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed

in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2). The Schafer reference discloses the claimed invention except for each anode sections are from the same fuel cell stack. It would have been obvious to one having ordinary skill in the art at the time the invention was made to join two fuel cell stacks into one fuel cell stack, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

17. Claim 9 is rejected under 35 U.S.C. 103(a) as being obvious over Faris et al. (US Publication 2004/0048133).

The Faris et al. reference discloses the claimed invention except for each anode sections are from the same fuel cell stack. It would have been obvious to one having ordinary skill in the art at the time the invention was made to join two fuel cell stacks into one fuel cell stack, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

***Response to Arguments***

18. Applicant's arguments with respect to claim 1 and dependent claims 5-10 have been considered but are moot in view of the new ground(s) of rejection.

19. Applicant's arguments filed 10/6/2006 in regards to claim 2 have been fully considered but they are not persuasive.

Applicant's principal arguments are:

*A) Claim 2 is not anticipated by Shafer and are patentable over the Shafer reference because the Shafer reference does not disclose a third flow path connecting the outlets of the first and second anode sections. The Shafer reference discloses flow paths that interconnect an anode outlet of one fuel cell stack with an anode inlet of a second downstream fuel cell stack. Anode inlets are not anode outlets.*

*B) Claim 2 is not anticipated by and are patentable over the Faris et al. reference.*

In response to Applicant's arguments, please consider the following

A) The Shafer reference does teach a third flow path connecting the outlet of the first anode section to an anode outlet of said second anode section, thereby providing flow communication between said first and second anode sections through said outlets. There are at least four outlets illustrated on Figure 2, one was admitted by the Applicant as Component 112, the others are 116, 120, 124. Component 112 is the outlet for corresponding fuel cell stack 80, component 116

is the outlet for corresponding fuel cell stack 82, component 120 is the outlet for corresponding fuel cell stack 84, component 124 is the outlet for corresponding fuel cell stack 86. Though these flow paths lead into another fuel cell stack, they are still an outlet for their corresponding fuel cell stack. For example, component 112 is an outlet for corresponding fuel cell stack 80 and component 112 is also an inlet for fuel cell stack 82; while it may be an inlet for the second fuel cell stack (component 82) it is undeniable that the outlet (component 112) is for the first fuel cell stack (80). Therefore, the outlets are 116, 112, 120 and 124 for the corresponding fuel cell stacks 82, 80, 84, 86. To summarize, the limitations require that the third flow path in flow communication to the outlet of the first fuel cell stack and also in flow communication with the outlet of the second fuel cell stack. Figure 2 illustrates, for example, component 148 which provides downstream flow communication between the first and second outlet flow paths.

Therefore, all the claim limitations are met by the Shafer reference

B) Claim 2 was never rejected under the Faris et al. reference..

### **Conclusion**

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOC

  
TRACY DOVE  
PRIMARY EXAMINER  
*12/06*